Surface Phytoplankton from 1982 Cruises in Frobisher Bay

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October 1984

Canadian Data Report of Fisheries and Aquatic Sciences No. 482

85-0898/

Canadian Data Report of Fisheries and Aquatic Sciences

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Canadian Data Report of

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Cat. No. Fs97-13/0482 ISSN 0706-6465

Correct citation for this publication:

Hsiao, Stephen I. C. and Nadia Pinkewycz. 1984. Surface phytoplankton from 1982 cruises in Frobisher Bay. Can. Data Rep. Fish. Aquat. Sci. 482: v + 46 p.

CONTENTS

Abstract/Résumé	iv
Acknowledgements	v
Introduction	1
Materials and Methods	3
References	4
Tables	5

ABSTRACT

Hsiao, Stephen I. C. and Nadia Pinkewycz. 1984. Surface phytoplankton from 1982 cruises in Frobisher Bay. Can. Data Rep. Fish. Aquat. Sci. 482: v + 46 p.

Surface phytoplankton collections made during Frobisher Bay cruises in August and September 1982 are tabulated quantitatively. A total of 77 species representing 34 genera were collected. The Bacillariophyta consisted of 56 species (18 Centrales and 38 Pennales), the Chlorophyta of 8 species, the Pyrrophyta of 5 species, the Chrysophyta of 4 species, the Euglenophyta of 3 species and the Cryptophyta of 1 species. The diatoms were the largest group in terms of the number of species and cells. Among them, centric diatoms had fewer species but a greater abundance of cells than the pennate diatoms.

Key words: Arctic, surface marine phytoplankton, species composition, abundance and standing stock.

RESUME

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Des données provenant d'échantillons de phytoplancton de surface, recueillis dans la baie de Frobisher au cours des mois d'août et septembre 1982, sont présentées sous forme de tableaux quantitatifs. Au total, 77 espèces représentant 34 genres de phytoplancton ont été recueillies. Le phytoplancton était regroupé par espèce de la façon suivante: 56 espèces de Bacillariophytes (dont 18 de forme centrique et 38 de forme pennée), 8 espèces de Chlorophytes, 5 espèces de Pyrrophytes, 4 espèces de Chrysophytes, 3 espèces d'Euglenophytes et 1 espèce de Cryptophyte. Les diatomées forment le groupe le plus important en termes d'espèces et de cellules. Parmi elles, les diatomées de forme centrique affichaient un nombre réduit d'espèces bien que l'abondance des cellules ait été comparativement supérieure à celle des diatomées de forme pennée.

ACKNOWLEDGEMENTS

We are much indebted to Dr J. A. Percy and Mr J. Fife for their effort in collecting the phytoplankton samples, and to the staff of the Ikaluit Research Laboratory for their assistance during the field work in Frobisher Bay. Thanks are also extended to Miss L. McMullon for typing the manuscript.

INTRODUCTION

Surface phytoplankton samples were taken on Arctic Biological Station cruises in Frobisher Bay during the summer of 1982. Two cruises were made (Fig. 1), one on 17-18 August (Stations 2-21) and one on 8 September (Stations 22-39). The samples from Station 1 were used for comparison with the samples from the cruises.

The data presented in this report deal primarily with species composition, abundance and standing stock of surface phytoplankton in upper Frobisher Bay.

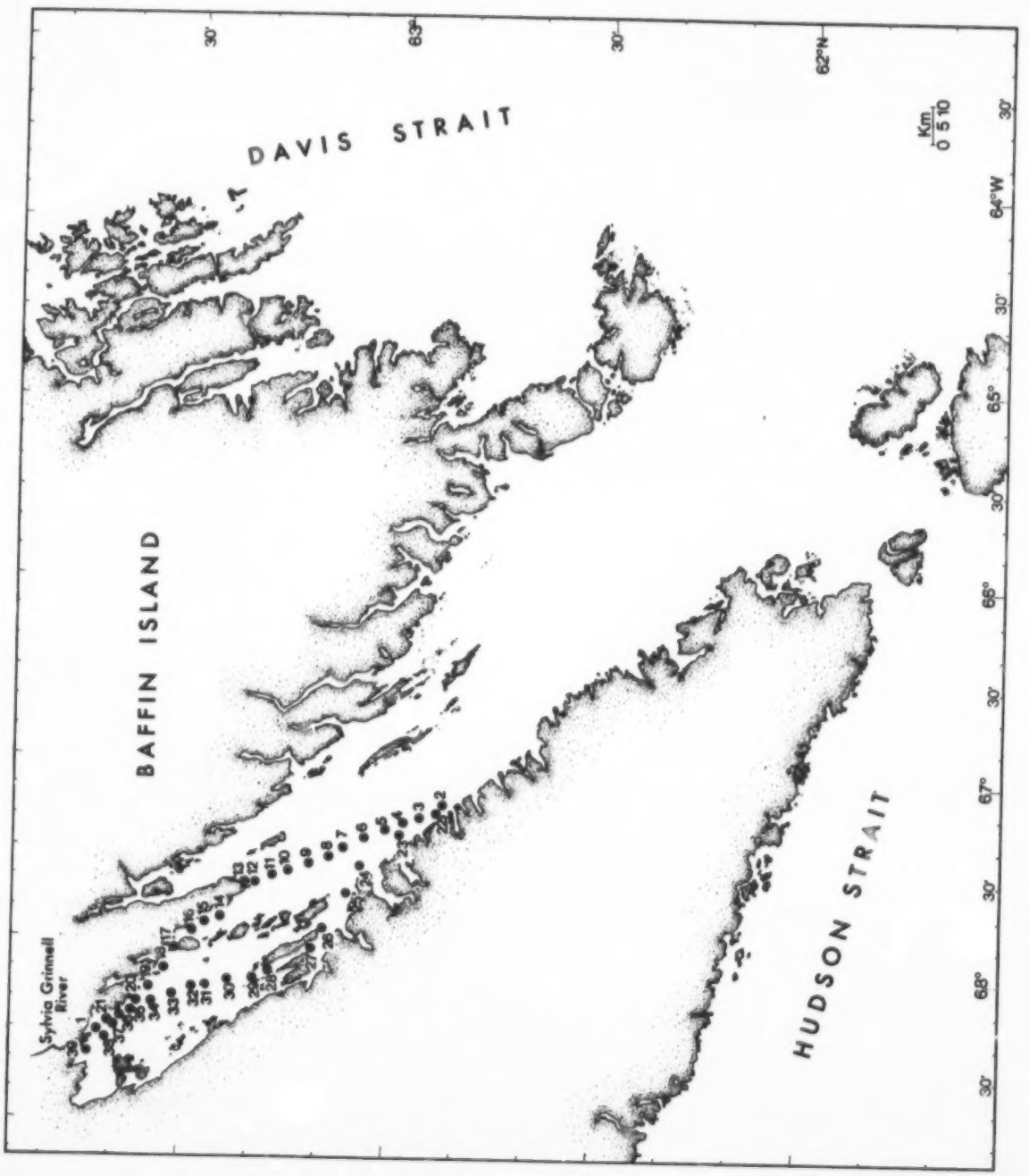

Fig. 1. Station locations in the upper Frobisher Bay.

MATERIALS AND METHODS

Surface waters containing natural populations of phytoplankton were collected with a plastic bucket. One litre of surface water from each station was filtered on board through Millipore HA type 47 mm-diameter filters. The filters were placed in petrislides, and kept frozen in a dry-ice box for later pigment analysis. Chlorophyll *a* was analyzed using a spectrophotometric technique according to the method of Strickland and Parsons (1972), and estimated by the equations of Jeffrey and Humphrey (1975).

Samples of 125 mL were preserved immediately with neutral formalin at a final concentration of 2% in Boston round polyethylene bottles. The preserved phytoplankton were quantitatively analyzed for species composition and abundance. The techniques for preparing permanent slides of cleaned diatoms for species identification were described by Foy and Hsiao (1976). The species were identified with the aid of a Leitz phase-contrast compound microscope. The cells were enumerated by the method of Hsiao (1979) with the aid of a Leitz inverted microscope.

REFERENCES

Foy, M. F. and S. I. C. Hsiao. 1976. Phytoplankton data from the Beaufort Sea, 1973 to 1975. Environment Canada, Fish. Mar. Serv. Tech. Rep. 617: 44 p.

Hsiao, S. I. C. 1979. Phytoplankton and sea ice microalgal data from Frobisher Bay, 1971 to 1978. Fisheries and Environment Canada, Fish. Mar. Serv. Data Rep. 155: 82 p.

Jeffrey, S. W. and G. F. Humphrey. 1975. New spectrophotometric equations for determining chlorophylls a, b, c_1 and c_2 in higher plants, algae and natural phytoplankton. Biochem. Physiol. Pflanzen 167: 191-194.

Strickland, J. D. H. and T. R. Parsons. 1972. A practical handbook of seawater analysis. Fish. Res. Board Can. Bull. 167: 1-310.

Table 1. Phytoplankton stations from 1982 Frobisher Bay cruises.

Station	Dates of collections	Time (AST)	North Latitude	West Longitude
1	20 Aug.	1000	63°42.8'	68°30.8'
	4 Sept.	1215	63°42.8'	68°30.8'
2	17 Aug.	1930	62°54'	67°13'
3	17 Aug.	2000	62°56.8'	67°15.9'
4	17 Aug.	2030	62°59.6'	67°18.5'
5	17 Aug.	2100	63°02.7'	67°21'
6	17 Aug.	2130	63°05.1'	67°23.9'
7	17 Aug.	2150	63°07.9'	67°24.8'
8	17 Aug.	2210	63°10.6'	67°28.9'
9	17 Aug.	2230	63°13.3'	67°31.6'
10	17 Aug.	2250	63°16'	67°34'
11	17 Aug.	2310	63°19'	67°36.6'
12	17 Aug.	2335	63°21.4'	67°39'
13	17 Aug.	2353	63°23.9'	67°41.7'
14	18 Aug.	0700	63°26.1'	67°51.9'
15	18 Aug.	0730	63°28.1'	67°55.3'
16	18 Aug.	0810	63°29.4'	67°57.6'
17	18 Aug.	0840	63°32.3'	68°03.1'
18	18 Aug.	0910	63°33.7'	68°10.9'
19	18 Aug.	0940	63°36.3'	68°17.8'
20	18 Aug.	1010	63°38.2'	68°23'
21	18 Aug.	1040	63°41.7'	68°29.1'
22	8 Sept.	0939	62°55'	67°12'
23	8 Sept.	1005	63°08'	67°22.7'
24	8 Sept.	1057	63°5.6'	67°32.4'
25	8 Sept.	1142	63°6.9'	67°43.7'
26	8 Sept.	1220	63°10.3'	67°55.3'
27	8 Sept.	1310	63°13.7'	68°0.6'
28	8 Sept.	1356	63°18'	68°6.2'
29	8 Sept.	1430	63°20.7'	68°9.8'
30	8 Sept.	1500	63°23.9'	68°13.3'
31	8 Sept.	1528	63°27.1'	68°15.7'
32	8 Sept.	1602	63°29.7'	68°17.1'
33	8 Sept.	1633	63°32.3'	68°19.4'
34	8 Sept.	1648	63°35.3'	68°21.6'
35	8 Sept.	1700	63°38.6'	68°24.4'
36	8 Sept.	1717	63°40.3'	68°26.2'
37	8 Sept.	1729	63°41'	68°28.2'
38	8 Sept.	1740	63°42.9'	68°30.7'
39	8 Sept.	1750	63°43.8'	68°31.3'

Table 2. Phytoplankton taxa found in the surface water during the 1982 Frobisher Bay cruises.

Bacillariophyta
  Centrales
    Chaetoceros affinis Lauder
    C. convolutus Castracane
    C. debilis Cleve
    C. decipiens Cleve
    C. externum Gran
    C. furcellatus Bailey
    C. ingolfianus Ostenfeld
    C. lauderi Ralfs
    C. septentrionalis Oestrup
    C. socialis Lauder
    C. wighami Brightwell
    Coscinodiscus lacustris Grunow
    C. polyacanthus var. intermedia Grunow
    Melosira arctica Dickie
    M. roeseana Rabenhorst
    Thalassiosira decipiens (Grunow) Joergensen
    T. gravida Cleve
    T. nordenskioeldii Cleve
  Pennales
    Amphora terroris Ehrenberg
    Cocconeis distans Gregory
    C. scutellum Ehrenberg
    C. scutellum var. parva (Grunow) Cleve
    Cylindrotheca closterium (Ehrenberg) Reimann et Lewin
    Cymbella affinis Kuetzing
    C. angustata (Wm. Smith) Cleve
    C. leptoceros (Ehrenberg) Kuetzing
    Diploneis bomboides (Schmidt) Cleve
    D. incurvata (Gregory) Cleve
    D. smithii (Brébisson) Cleve
    Eunotia veneris (Kuetzing) De Toni
    Fragilaria pinnata Ehrenberg
    F. islandica Grunow
    Grammatophora arctica Cleve
    Gyrosigma Hassall
    Licmophora dalmatica (Kuetzing) Grunow
    Navicula agrestis Hustedt
    N. capitata Ehrenberg
    N. crassirostris Grunow
    N. delicatula Cleve
    N. digitoradiata (Gregory) Ralfs
    N. gastrum (Ehrenberg) Kuetzing)
    N. granii (E. Joergensen) Gran

Table 2. (Continued).

N. humerosa Brébisson
N. imperfecta Cleve
N. kariana Grunow
N. peregrina (Ehrenberg) Kuetzing
N. protracta (Grunow) Cleve
N. transitans Cleve
N. valida Cleve et Grunow
Nitzschia angustata Grunow
N. frigida Grunow
N. grunowii Hasle
N. seriata Cleve
Opephora martyi Héribaud
Pinnularia Ehrenberg
Rhabdonema arcuatum (Lyngbye) Kuetzing
Stauroneis quadripedis (Cleve-Euler) Hendey
Synedra tabulata (Agardh) Kuetzing
Chlorophyta
Carteria cordiformis (Carter) Dill
Chlamydomonas ballenyana Kol et Flint
C. marina Cohn
C. plethora Butcher
C. pulsatilla Wohlenweber
C. tetraolaris Wohlenweber
Closterium lineatum Ehrenberg
Cosmarium Corda
Trochiscia multispinosa (Moebins) Lemmermann
Chrysophyta
Dinobryon balticum (Schuett) Lemmermann
D. cylindricum Imhof
Phaeocystis pouchetii (Hariot) Lagerheim
Salpingoeca natans Groentved
Cryptophyta
Chroomonas placoidea Butcher
Euglenophyta
Euglena proxima Dangeard
E. schmitzii Gojdics
E. viridis Ehrenberg
Pyrrophyta
Goniaulax monilata Howell
Peridinium diabolus Cleve
P. punctulatum Paulsen
Prorocentrum micans Ehrenberg
P. rampii Sournia

Table 3. Species composition, abundance and standing stock of surface phytoplankton in Frobisher Bay at Station 1 during August and September 1982.

Date	August 20	September 4
Chlorophyll *a* ($mg \cdot m^{-3}$)	2.54	1.54
Total phytoplankters ($cells \cdot L^{-1}$)	9,980	17,280
Bacillariophyta	9,540	16,900
Centrales	9,380	16,760
Chaetoceros affinis	1,440	1,100
C. decipiens	680	1,300
C. furcellatus	5,360	11,700
C. septentrionalis	40	220
C. wighami	580	1,460
Thalassiosira sp.	80	--
T. decipiens	1,200	980
Pennales	160	140
Diploneis bomboides	--	20
Fragilaria pinnata	20	--
Navicula sp.	20	--
N. granii	60	--
N. transitans	20	20
Nitzschia grunowii	--	20
N. seriata	40	80
Chlorophyta	420	240
Chlamydomonas ballenyana	220	160
C. pulsatilla	200	60
Cosmarium sp.	--	20
Chrysophyta	--	120
D. cylindricum	--	120
Euglenophyta	20	--
Euglena proxima	20	--
Pyrrophyta	--	20
Peridinium diabolus	--	20

Table 4. Species composition, abundance and standing stock of surface phytoplankton in Frobisher Bay at Station 2, August 17, 1982.

Chlorophyll a ($mg \cdot m^{-3}$)	8.57
Total phytoplankters ($cells \cdot L^{-1}$)	80,200
Bacillariophyta	72,600
Centrales	68,700
Chaetoceros affinis	16,300
C. decipiens	10,100
C. externum	3,700
C. furcellatus	20,000
C. lauderi	100
C. septentrionalis	4,800
C. socialis	1,400
C. wighami	7,300
Coscinodiscus lacustris	100
Thalassiosira decipiens	800
T. gravida	300
T. nordenskioeldii	3,800
Pennales	3,900
Cocconeis distans	100
Cylindrotheca closterium	100
Fragilaria sp.	600
Navicula peregrina	500
N. valida	300
Nitzschia angustata	1,300
N. frigida	400
N. seriata	600
Chlorophyta	1,700
Chlamydomonas plethora	1,000
C. pulsatilla	200
C. tetraolaris	200
Closterium lineatum	300
Chrysophyta	200
Unidentified	200
Cryptophyta	4,200
Chroomonas placoidea	4,200
Euglenophyta	100
Euglena schmitzii	100
Pyrrophyta	1,400
Goniaulax sp.	300
G. monilata	100
Prorocentrum rampii	1,000

Table 5. Species composition, abundance and standing stock of surface phytoplankton in Frobisher Bay at Station 3, August 17, 1982.

Chlorophyll a ($mg \cdot m^{-3}$)	6.19
Total phytoplankters ($cells \cdot L^{-1}$)	85,200
Bacillariophyta	71,800
Centrales	63,100
Chaetoceros affinis	15,300
C. decipiens	12,800
C. externum	3,100
C. furcellatus	12,800
C. lauderi	200
C. septentrionalis	2,100
C. socialis	1,000
C. wighami	7,600
Coscinodiscus lacustris	200
C. polyacanthus var. *intermedia*	100
Thalassiosira spp.	800
T. decipiens	3,500
T. gravida	200
T. nordenskioeldii	3,400
Pennales	8,700
Cylindrotheca closterium	100
Cymbella affinis	200
C. leptoceros	100
Navicula sp.	100
N. capitata	200
N. granii	400
N. peregrina	300
Nitzschia angustata	500
N. frigida	200
N. seriata	2,300
Stauroneis quadripedis	4,300
Chlorophyta	2,400
Chlamydomonas plethora	500
C. pulsatilla	200
C. tetraolaris	1,600
Trochiscia multispinosa	100
Chrysophyta	100
Phaeocystis pouchetii	100
Cryptophyta	10,600
Chroomonas placoidea	10,600
Pyrrophyta	300
Goniaulax sp.	200
G. monilata	100

Table 6. Species composition, abundance and standing stock of surface phytoplankton in Frobisher Bay at Station 4, August 17, 1982.

Chlorophyll a ($mg \cdot m^{-3}$)	4.66
Total phytoplankters ($cells \cdot L^{-1}$)	57,800
Bacillariophyta	41,400
Centrales	30,600
Chaetoceros affinis	7,600
C. convolutus	100
C. decipiens	7,500
C. externum	1,600
C. furcellatus	5,700
C. septentrionalis	3,900
C. socialis	100
C. wighami	1,500
Coscinodiscus lacustris	700
C. polyacanthus var. *intermedia*	100
Thalassiosira sp.	500
T. decipiens	700
T. gravida	300
T. nordenskioeldii	300
Pennales	10,800
Cylindrotheca closterium	100
Cymbella angustata	100
Fragilaria islandica	700
Navicula sp.	200
N. capitata	200
N. granii	2,900
N. peregrina	100
Nitzschia angustata	900
N. frigida	1,400
Stauroneis quadripedis	4,200
Chlorophyta	3,300
Carteria cordiformis	300
Chlamydomonas plethora	1,900
C. pulsatilla	1,000
Trochiscia multispinosa	100
Chrysophyta	500
Unidentified	500
Cryptophyta	12,100
Chroomonas placoidea	12,100
Pyrrophyta	500
Goniaulax sp.	100
Peridinium diabolus	100
P. punctulatum	200
Prorocentrum micans	100

Table 7. Species composition, abundance and standing stock of surface phytoplankton in Frobisher Bay at Station 5, August 17, 1982.

Chlorophyll a ($mg \cdot m^{-3}$)	7.37
Total phytoplankters ($cells \cdot L^{-1}$)	27,500
Bacillariophyta	21,400
Centrales	20,500
Chaetoceros affinis	2,800
C. decipiens	2,000
C. externum	5,600
C. furcellatus	2,700
C. ingolfianus	100
C. septentrionalis	4,500
C. wighami	200
Coscinodiscus lacustris	900
Thalassiosira decipiens	900
T. gravida	400
T. nordenskioeldii	400
Pennales	900
Cocconeis distans	100
Cylindrotheca closterium	200
Cymbella affinis	100
Navicula crassirostris	200
N. peregrina	100
Nitzschia angustata	200
Chlorophyta	700
Chlamydomonas plethora	200
C. pulsatilla	500
Chrysophyta	400
Dinobryon sp.	200
Phaeocystis pouchetii	100
Salpingoeca natans	100
Cryptophyta	4,400
Chroomonas placoidea	4,400
Euglenophyta	100
Euglena schmitzii	100
Pyrrophyta	500
Peridinium diabolus	100
P. punctulatum	100
Prorocentrum rampii	300

Table 8. Species composition, abundance and standing stock of surface phytoplankton in Frobisher Bay at Station 6, August 17, 1982.

Chlorophyll a ($mg \cdot m^{-3}$)	7.06
Total phytoplankters ($cells \cdot L^{-1}$)	40,900
Bacillariophyta	35, 100
Centrales	31,600
Chaetoceros affinis	5,400
C. decipiens	3,800
C. externum	4,000
C. furcellatus	9,100
C. septentrionalis	4,000
C. socialis	1,200
C. wighami	1,000
Coscinodiscus lacustris	600
Thalassiosira decipiens	1,700
T. gravida	800
Pennales	3,500
Cocconeis distans	300
Cylindrotheca closterium	300
Licmophora dalmatica	100
Navicula c.assirostris	200
N. granii	1,700
N. imperfecta	100
N. peregrina	100
Nitzschia angustata	400
N. frigida	200
N. seriata	100
Chlorophyta	1,100
Carteria cordiformis	600
Chlamydomonas plethora	100
C. pulsatilla	400
Chrysophyta	300
Dinobryon sp.	200
Phaeocystis pouchetii	100
Cryptophyta	3,200
Chroomonas placoidea	3,200
Pyrrophyta	1,200
Goniaulax sp.	400
G. monilata	200
Peridinium diabolus	100
Prorocentrum rampii	500

Table 9. Species composition, abundance and standing stock of surface phytoplankton in Frobisher Bay at Station 7, August 17, 1982.

Chlorophyll a ($mg \cdot m^{-3}$)	7.79
Total phytoplankters ($cells \cdot L^{-1}$)	40,900
Bacillariophyta	33,900
Centrales	29,200
Chaetoceros affinis	4,000
C. decipiens	1,800
C. externum	3,600
C. furcellatus	8,500
C. ingolfianus	100
C. septentrionalis	3,200
C. socialis	900
C. wighami	1,400
Coscinodiscus lacustris	500
Thalassiosira decipiens	3,100
T. gravida	1,900
T. nordenskioeldii	200
Pennales	4,700
Cocconeis distans	200
Cylindrotheca closterium	300
Cymbella affinis	100
Navicula capitata	1,400
N. granii	300
N. peregrina	400
Nitzschia angustata	400
N. frigida	500
N. seriata	800
Stauroneis quadripedis	300
Chlorophyta	1,600
Carteria cordiformis	100
Chlamydomonas plethora	200
C. pulsatilla	1,300
Chrysophyta	500
Dinobryon sp.	500
Cryptophyta	4,600
Chroomonas placoidea	4,600
Euglenophyta	200
Euglena schmitzii	200
Pyrrophyta	100
Goniaulax sp.	100

Table 10. Species composition, abundance and standing stock of surface phytoplankton in Frobisher Bay at Station 8, August 17, 1982.

Chlorophyll *a* ($mg \cdot m^{-3}$)	7.38
Total phytoplankters ($cells \cdot L^{-1}$)	21,300
Bacillariophyta	16,600
Centrales	14,500
Chaetoceros affinis	1,900
C. decipiens	1,600
C. externum	700
C. furcellatus	4,500
C. lauderi	400
C. septentrionalis	3,300
C. socialis	600
C. wighami	400
Coscinodiscus lacustris	300
Thalassiosira decipiens	500
T. gravida	100
T. nordenskioeldii	200
Pennales	2,100
Navicula granii	1,500
N. peregrina	100
Nitzschia angustata	500
Chlorophyta	1,400
Carteria cordiformis	100
Chlamydomonas pulsatilla	1,300
Chrysophyta	200
Dinobryon sp.	100
Phaeocystis pouchetii	100
Cryptophyta	2,100
Chroomonas placoidea	2,100
Euglenophyta	300
Euglena schmitzii	300
Pyrrophyta	700
Goniaulax sp.	300
G. monilata	100
Peridinium punctulatum	100
Prorocentrum rampii	200

Table 11. Species composition, abundance and standing stock of surface phytoplankton in Frobisher Bay at Station 9, August 17, 1982.

Chlorophyll a ($mg \cdot m^{-3}$)	5.73
Total phytoplankters ($cells \cdot L^{-1}$)	49,100
Bacillariophyta	44,000
Centrales	41,800
Chaetoceros affinis	2,700
C. decipiens	4,000
C. externum	900
C. furcellatus	27,600
C. septentrionalis	3,900
C. socialis	900
C. wighami	400
Coscinodiscus lacustris	400
Thalassiosira decipiens	600
T. gravida	100
T. nordenskioeldii	300
Pennales	2,200
Cocconeis distans	200
Diploneis incurvata	100
Navicula granii	800
N. peregrina	100
Nitzschia angustata	700
N. seriata	300
Chlorophyta	1,200
Carteria cordiformis	100
Chlamydomonas pulsatilla	1,100
Chrysophyta	300
Dinobryon sp.	300
Cryptophyta	3,400
Chroomonas placoidea	3,400
Pyrrophyta	200
Goniaulax sp.	100
Peridinium punctulatum	100

Table 12. Species composition, abundance and standing stock of surface phytoplankton in Frobisher Bay at Station 10, August 17, 1982.

Chlorophyll a ($mg \cdot m^{-3}$)	4.90
Total phytoplankters ($cells \cdot L^{-1}$)	41,800
Bacillariophyta	32,900
Centrales	31,400
Chaetoceros affinis	7,200
C. decipiens	2,500
C. externum	1,100
C. furcellatus	13,200
C. septentrionalis	3,300
C. socialis	200
C. wighami	900
Coscinodiscus lacustris	100
Thalassiosira decipiens	2,500
T. nordenskioeldii	400
Pennales	1,500
Cocconeis distans	300
Navicula peregrina	100
Nitzschia angustata	500
N. seriata	400
Synedra tabulata	200
Chlorophyta	2,700
Carteria cordiformis	700
Chlamydomonas pulsatilla	1,900
Closterium lineatum	100
Chrysophyta	200
Dinobryon sp.	200
Cryptophyta	5,400
Chroomonas placoidea	5,400
Euglenophyta	100
Euglena schmitzii	100
Pyrrophyta	500
Goniaulax sp.	100
Peridinium diabolus	200
Prorocentrum micans	100
P. rampii	100

Table 13. Species composition, abundance and standing stock of surface phytoplankton in Frobisher Bay at Station 11, August 17, 1982.

Chlorophyll a ($mg \cdot m^{-3}$)	4.87
Total phytoplankters ($cells \cdot L^{-1}$)	22,600
Bacillariophyta	17,600
Centrales	16,200
Chaetoceros affinis	2,200
C. decipiens	1,300
C. externum	1,500
C. furcellatus	6,900
C. septentrionalis	1,700
C. socialis	700
C. wighami	1,500
Thalassiosira decipiens	400
Pennales	1,400
Cocconeis distans	300
C. scutellum	100
Grammatophora arctica	100
Navicula agrestis	300
N. granii	400
N. peregrina	200
Chlorophyta	1,000
Carteria cordiformis	200
Chlamydomonas marina	100
C. pulsatilla	700
Chrysophyta	300
Dinobryon sp.	100
Phaeocystis pouchetii	200
Cryptophyta	3,600
Chroomonas placoidea	3,600
Pyrrophyta	100
Goniaulax sp.	100

Table 14. Species composition, abundance and standing stock of surface phytoplankton in Frobisher Bay at Station 12, August 17, 1982.

Chlorophyll a ($mg \cdot m^{-3}$)	5.72
Total phytoplankters ($cells \cdot L^{-1}$)	24,000
Bacillariophyta	19,400
Centrales	18,100
Chaetoceros affinis	1,300
C. decipiens	1,200
C. externum	2,700
C. furcellatus	8,700
C. septentrionalis	1,900
C. socialis	200
C. wighami	700
Thalassiosira decipiens	1,300
T. gravida	100
Pennales	1,300
Cocconeis scutellum	200
Cylindrotheca closterium	100
Meridion sp.	300
Navicula peregrina	300
N. valida	300
Rhabdonema arcuatum	100
Chlorophyta	1,000
Carteria cordiformis	200
Chlamydomonas pulsatilla	800
Cryptophyta	3,400
Chroomonas placoidea	3,400
Pyrrophyta	200
Goniaulax sp.	100
G. monilata	100

Table 15. Species composition, abundance and standing stock of surface phytoplankton in Frobisher Bay at Station 13, August 18, 1982.

Chlorophyll a ($mg \cdot m^{-3}$)	4.61
Total phytoplankters ($cells \cdot L^{-1}$)	38,500
Bacillariophyta	31,200
Centrales	28,900
Chaetoceros affinis	6,800
C. decipiens	3,500
C. externum	1,100
C. furcellatus	12,500
C. septentrionalis	2,200
C. socialis	100
C. wighami	1,300
Coscinodiscus lacustris	500
Thalassiosira decipiens	700
T. gravida	200
Pennales	2,300
Cocconeis distans	200
Navicula granii	1,100
N. peregrina	100
N. valida	300
Pinnularia sp.	200
Rhabdonema arcuatum	100
Stauroneis sp.	200
Synedra tabulata	100
Chlorophyta	2,300
Carteria cordiformis	200
Chlamydomonas pulsatilla	2,100
Chrysophyta	200
Phaeocystis pouchetii	200
Cryptophyta	4,800
Chroomonas placoidea	4,800

Table 16. Species composition, abundance and standing stock of surface phytoplankton in Frobisher Bay at Station 14, August 18, 1982.

Chlorophyll a ($mg \cdot m^{-3}$)	5.16
Total phytoplankters ($cells \cdot L^{-1}$)	51,000
Bacillariophyta	45,200
Centrales	44,100
Chaetoceros affinis	5,300
C. decipiens	3,800
C. externum	3,500
C. furcellatus	25,400
C. septentrionalis	2,900
C. socialis	200
C. wighami	1,600
Coscinodiscus lacustris	200
Thalassiosira decipiens	300
T. gravida	100
T. nordenskioeldii	800
Pennales	1,100
Cocconeis distans	100
Navicula agrestis	300
N. granii	400
N. peregrina	200
N. valida	100
Chlorophyta	1,400
Carteria cordiformis	400
Chlamydomonas pulsatilla	1,000
Chrysophyta	100
Dinobryon sp.	100
Cryptophyta	4,100
Chroomonas placoidea	4,100
Pyrrophyta	200
Goniaulax sp.	100
Peridinium punctulatum	100

Table 17. Species composition, abundance and standing stock of surface phytoplankton in Frobisher Bay at Station 15, August 18, 1982.

Chlorophyll a ($mg \cdot m^{-3}$)	3.58
Total phytoplankters ($cells \cdot L^{-1}$)	22,900
Bacillariophyta	17,900
Centrales	17,500
Chaetoceros affinis	900
C. decipiens	3,700
C. externum	400
C. furcellatus	8,000
C. septentrionalis	2,200
C. wighami	200
Coscinodiscus lacustris	300
Thalassiosira decipiens	1,600
T. nordenskioeldii	200
Pennales	400
Cylindrotheca closterium	200
Navicula peregrina	200
Chlorophyta	2,800
Chlamydomonas pulsatilla	2,800
Chrysophyta	200
Dinobryon sp.	200
Cryptophyta	1,700
Chroomonas placoidea	1,700
Pyrrophyta	300
Goniaulax sp.	100
G. monilata	100
Prorocentrum rampii	100

Table 18. Species composition, abundance and standing stock of surface phytoplankton in Frobisher Bay at Station 16, August 18, 1982.

Chlorophyll a ($mg \cdot m^{-3}$)	3.21
Total phytoplankters ($cells \cdot L^{-1}$)	12,800
Bacillariophyta	
Centrales	10,900
Chaetoceros affinis	1,200
C. decipiens	1,600
C. externum	1,600
C. furcellatus	3,500
C. septentrionalis	800
Coscinodiscus lacustris	700
Thalassiosira decipiens	1,300
T. nordenskioeldii	200
Pennales	500
Cocconeis distans	100
Fragilaria islandica	200
Navicula protracta	100
N. valida	100
Chlorophyta	200
Chlamydomonas pulsatilla	200
Chrysophyta	100
Phaeocystis pouchetii	100
Cryptophyta	1,000
Chroomonas placoidea	1,000
Pyrrophyta	100
Prorocentrum rampii	100

Table 19. Species composition, abundance and standing stock of surface phytoplankton in Frobisher Bay at Station 17, August 18, 1982.

Chlorophyll a ($mg \cdot m^{-3}$)	3.31
Total phytoplankters ($cells \cdot L^{-1}$)	19,100
Bacillariophyta	18,000
Centrales	16,300
Chaetoceros affinis	2,500
C. borealis	200
C. decipiens	1,500
C. furcellatus	7,400
C. septentrionalis	600
Coscinodiscus lacustris	500
Thalassiosira decipiens	900
T. gravida	800
T. nordenskioeldii	1,900
Pennales	1,700
Cocconeis scutellum	200
Navicula granii	900
N. peregrina	200
N. valida	300
Nitzschia frigida	100
Chlorophyta	700
Carteria cordiformis	200
Chlamydomonas pulsatilla	500
Chrysophyta	100
Phaeocystis pouchetii	100
Cryptophyta	100
Chroomonas placoidea	100
Euglenophyta	100
Euglena viridis	100
Pyrrophyta	100
Goniaulax sp.	100

Table 20. Species composition, abundance and standing stock of surface phytoplankton in Frobisher Bay at Station 18, August 18, 1982.

Chlorophyll a ($mg \cdot m^{-3}$)	5.03
Total phytoplankters ($cells \cdot L^{-1}$)	42,400
Bacillariophyta	42,000
Centrales	40,400
Chaetoceros affinis	9,700
C. decipiens	5,100
C. furcellatus	14,600
C. ingolfianus	100
C. septentrionalis	1,100
C. wighami	2,500
Thalassiosira decipiens	1,600
T. gravida	2,000
T. nordenskioeldii	3,700
Pennales	1,600
Cocconeis scutellum	100
Licmophora dalmatica	100
Navicula granii	600
N. peregrina	300
N. protracta	100
Nitzschia frigida	400
Chlorophyta	200
Carteria cordiformis	200
Chrysophyta	100
Dinobryon sp.	100
Pyrrophyta	100
Prorocentrum rampii	100

Table 21. Species composition, abundance and standing stock of surface phytoplankton in Frobisher Bay at Station 19, August 18, 1982.

Chlorophyll *a* ($mg \cdot m^{-3}$)	4.99
Total phytoplankters ($cells \cdot L^{-1}$)	26,800
Bacillariophyta	26,100
Centrales	22,600
Chaetoceros affinis	6,100
C. decipiens	2,700
C. furcellatus	6,000
C. septentrionalis	700
C. wighami	2,800
Coscinodiscus lacustris	200
Thalassiosira decipiens	700
T. gravida	1,100
T. nordenskioeldii	2,300
Pennales	3,500
Cocconeis scutellum	300
Fragilaria islandica	400
Licmophora dalmatica	300
Navicula agrestis	100
N. granii	2,300
N. peregrina	100
Chlorophyta	300
Carteria cordiformis	200
Chlamydomonas pulsatilla	100
Chrysophyta	200
Phaeocystis pouchetii	200
Euglenophyta	100
Euglena schmitzii	100
Pyrrophyta	100
Peridinium diabolus	100

Table 22. Species composition, abundance and standing stock of surface phytoplankton in Frobisher Bay at Station 20, August 18, 1982.

Chlorophyll a ($mg \cdot m^{-3}$)	5.41
Total phytoplankters ($cells \cdot L^{-1}$)	29,600
Bacillariophyta	29,400
Centrales	28,800
Chaetoceros affinis	7,600
C. decipiens	5,000
C. furcellatus	4,900
C. septentrionalis	1,000
C. wighami	2,800
Melosira arctica	400
Thalassiosira gravida	4,000
T. nordenskioeldii	3,100
Pennales	600
Cocconeis scutellum	100
Navicula agrestis	100
N. peregrina	200
Nitzschia seriata	200
Chlorophyta	100
Closterium sp.	100
Chrysophyta	100
Salpingoeca natans	100

Table 23. Species composition, abundance and standing stock of surface phytoplankton in Frobisher Bay at Station 21, August 18, 1982.

Chlorophyll a ($mg \cdot m^{-3}$)	4.33
Total phytoplankters ($cells \cdot L^{-1}$)	19,300
Bacillariophyta	18,600
Centrales	17,700
Chaetoceros affinis	4,900
C. decipiens	1,200
C. furcellatus	5,500
C. septentrionalis	200
C. wighami	300
Coscinodiscus lacustris	300
Thalassiosira decipiens	1,200
T. gravida	1,800
T. nordenskioeldii	2,300
Pennales	900
Diploneis smithii	100
Fragilaria islandica	100
Navicula peregrina	200
N. protracta	300
Nitzschia frigida	200
Chlorophyta	200
Chlamydomonas pulsatilla	200
Chrysophyta	200
Phaeocystis pouchetii	200
Pyrrophyta	300
Peridinium diabolus	100
Prorocentrum micans	100
P. rampii	100

Table 24. Species composition and abundance of surface phytoplankton in Frobisher Bay at Station 22, September 8, 1982.

Total phytoplankters (cells·L^{-1})	120
Bacillariophyta	20
Pennales	20
Cylindrotheca closterium	20
Chlorophyta	60
Chlamydomonas pulsatilla	60
Chrysophyta	20
Dinobryon balticum	10
Phaeocystis pouchetii	10
Euglenophyta	10
Euglena schmitzii	10
Pyrrophyta	10
Prorocentrum sp.	10

Table 25. Species composition and abundance of surface phytoplankton in Frobisher Bay at Station 23, September 8, 1982.

Total phytoplankters (cells·L^{-1})	4,600
Bacillariophyta	2,300
Centrales	1,400
Chaetoceros externum	300
C. furcellatus	400
C. septentrionalis	300
Coscinodiscus lacustris	100
Thalassiosira decipiens	100
T. gravida	200
Pennales	900
Cylindrotheca closterium	200
Fragilaria islandica	100
Licmophora dalmatica	100
Navicula agrestis	200
N. capitata	100
N. protracta	100
Nitzschia frigida	100
Chlorophyta	1,200
Carteria cordiformis	100
Chlamydomonas pulsatilla	1,100
Cryptophyta	800
Chroomonas placoidea	800
Pyrrophyta	300
Goniaulax monilata	100
Prorocentrum micans	100
P. rampii	100

Table 26. Species composition and abundance of surface phytoplankton in Frobisher Bay at Station 24, September 8, 1982.

Total phytoplankters (cells·L^{-1})	2,800
Bacillariophyta	1,300
Centrales	600
Chaetoceros affinis	100
C. furcellatus	100
C. septentrionalis	200
Thalassiosira decipiens	100
T. gravida	100
Pennales	700
Navicula agrestis	300
Nitzschia frigida	100
Opephora martyi	300
Chlorophyta	700
Chlamydomonas pulsatilla	700
Chrysophyta	700
Phaeocystis pouchetii	600
Salpingoeca natans	100
Pyrrophyta	100
Prorocentrum rampii	100

Table 27. Species composition and abundance of surface phytoplankton in Frobisher Bay at Station 25, September 8, 1982.

Total phytoplankters (cells·L^{-1})	6,600
Bacillariophyta	5,600
Centrales	3,600
Chaetoceros decipiens	300
C. externum	300
C. furcellatus	1,800
C. septentrionalis	200
C. socialis	100
Coscinodiscus lacustris	200
Melosira roeseana	400
Thalassiosira decipiens	300
Pennales	2,000
Cocconeis scutellum	100
Navicula agrestis	400
N. capitata	100
N. kariana	100
N. protracta	100
Opephora martyi	1,200
Chlorophyta	100
Chlamydomonas marina	100
Chrysophyta	100
Phaeocystis pouchetii	100
Cryptophyta	700
Chroomonas placoidea	700
Pyrrophyta	100
Prorocentrum rampii	100

Table 28. Species composition and abundance of surface phytoplankton in Frobisher Bay at Station 26, September 8, 1982.

Total phytoplankters (cells·L^{-1})	1,100
Bacillariophyta	800
Centrales	700
Chaetoceros decipiens	100
C. externum	100
C. furcellatus	300
C. septentrionalis	100
Thalassiosira decipiens	100
Pennales	100
Cocconeis scutellum var. *parva*	100
Chlorophyta	100
Chlamydomonas pulsatilla	100
Pyrrophyta	200
Goniaulax monilata	100
Prorocentrum rampii	100

Table 29. Species composition and abundance of surface phytoplankton in Frobisher Bay at Station 27, September 8, 1982.

Total phytoplankters (cells·L^{-1})	13,200
Bacillariophyta	12,600
Centrales	5,800
Chaetoceros affinis	1,200
C. externum	400
C. furcellatus	3,100
C. septentrionalis	600
Coscinodiscus lacustris	100
Thalassiosira decipiens	100
T. gravida	300
Pennales	6,800
Navicula delicatula	100
N. granii	6,200
N. valida	100
Nitzschia frigida	200
Opephora martyi	100
Pinnularia sp.	100
Chlorophyta	300
Chlamydomonas pulsatilla	200
Closterium sp.	100
Chrysophyta	100
Phaeocystis pouchetii	100
Cryptophyta	100
Chroomonas placoidea	100
Pyrrophyta	100
Prorocentrum micans	100

Table 30. Species composition and abundance of surface phytoplankton in Frobisher Bay at Station 28, September 8, 1982.

Total phytoplankters (cells·L^{-1})	6,200
Bacillariophyta	2,600
Centrales	2,400
Chaetoceros decipiens	300
C. externum	200
C. furcellatus	1,200
C. septentrionalis	200
Thalassiosira decipiens	200
T. gravida	200
T. nordenskioeldii	100
Pennales	200
Diploneis incurvata	100
Nitzschia frigida	100
Chlorophyta	300
Chlamydomonas pulsatilla	300
Chrysophyta	300
Dinobryon sp.	100
Phaeocystis pouchetii	200
Cryptophyta	2,900
Chroomonas placoidea	2,900
Pyrrophyta	100
Prorocentrum micans	100

Table 31. Species composition and abundance of surface phytoplankton in Frobisher Bay at Station 29, September 8, 1982.

Total phytoplankters (cells·L^{-1})	6,100
Bacillariophyta	4,500
Centrales	4,000
Chaetoceros affinis	700
C. externum	200
C. furcellatus	2,200
C. septentrionalis	300
Thalassiosira decipiens	600
Pennales	500
Cocconeis scutellum	100
Navicula valida	200
Nitzschia seriata	100
Pinnularia sp.	100
Chlorophyta	200
Chlamydomonas pulsatilla	200
Chrysophyta	100
Phaeocystis pouchetii	100
Cryptophyta	1,200
Chroomonas placoidea	1,200
Euglenophyta	100
Euglena viridis	100

Table 32. Species composition and abundance of surface phytoplankton in Frobisher Bay at Station 30, September 8, 1982.

Total phytoplankters (cells·L^{-1})	20,500
Bacillariophyta	18,600
Centrales	18,600
Chaetoceros affinis	6,400
C. externum	200
C. furcellatus	7,700
C. septentrionalis	1,000
C. wighami	900
Thalassiosira decipiens	700
T. nordenskioeldii	1,700
Chlorophyta	100
Chlamydomonas pulsatilla	100
Cryptophyta	1,500
Chroomonas placoidea	1,500
Euglenophyta	200
Euglena schmitzii	100
E. viridis	100
Pyrrophyta	100
Peridinium diabolus	100

Table 33. Species composition and abundance of surface phytoplankton in Frobisher Bay at Station 31, September 8, 1982.

Total phytoplankters (cells·L^{-1})	14,700
Bacillariophyta	12,800
Centrales	12,100
Chaetoceros affinis	2,100
C. decipiens	100
C. externum	900
C. furcellatus	5,800
C. septentrionalis	800
C. wighami	600
Coscinodiscus lacustris	200
Thalassiosira decipiens	800
T. gravida	100
T. nordenskioeldii	700
Pennales	700
Cylindrotheca closterium	100
Navicula digitoradiata	200
N. peregrina	100
Opephora martyi	300
Chlorophyta	200
Chlamydomonas pulsatilla	200
Chrysophyta	200
Phaeocystis pouchetii	200
Cryptophyta	1,300
Chroomonas placoidea	1,300
Euglenophyta	100
Euglena schmitzii	100
Pyrrophyta	100
Peridinium diabolus	100

Table 34. Species composition and abundance of surface phytoplankton in Frobisher Bay at Station 32, September 8, 1982.

Total phytoplankters (cells·L^{-1})	7,100
Bacillariophyta	5,400
Centrales	5,100
Chaetoceros affinis	700
C. decipiens	900
C. furcellatus	2,500
C. septentrionalis	200
C. wighami	600
Thalassiosira decipiens	100
T. gravida	100
Pennales	300
Grammatophora arctica	100
Navicula peregrina	100
Opephora martyi	100
Chlorophyta	1,500
Carteria cordiformis	100
Chlamydomonas pulsatilla	1,300
Closterium sp.	100
Chrysophyta	100
Phaeocystis pouchetii	100
Euglenophyta	100
Euglena schmitzii	100

Table 35. Species composition and abundance of surface phytoplankton in Frobisher Bay at Station 33, September 8, 1982.

Total phytoplankters (cells·L^{-1})	4,900
Bacillariophyta	2,300
Centrales	2,100
Chaetoceros affinis	700
C. furcellatus	500
C. septentrionalis	100
C. wighami	400
Thalassiosira decipiens	400
Pennales	200
Licmophora dalmatica	100
Pinnularia sp.	100
Chlorophyta	1,600
Carteria cordiformis	300
Chlamydomonas pulsatilla	1,300
Chrysophyta	200
Dinobryon sp.	100
Phaeocystis pouchetii	100
Cryptophyta	600
Chroomonas placoidea	600
Pyrrophyta	200
Prorocentrum rampii	200

Table 36. Species composition and abundance of surface phytoplankton in Frobisher Bay at Station 34, September 8, 1982.

Total phytoplankters (cells·L^{-1})	6,000
Bacillariophyta	4,800
Centrales	4,000
Chaetoceros affinis	1,300
C. debilis	1,000
C. furcellatus	500
C. septentrionalis	300
Coscinodiscus lacustris	100
Thalassiosira decipiens	500
T. gravida	200
T. nordenskioeldii	100
Pennales	800
Cocconeis scutellum	100
Navicula agrestis	200
N. gastrum	100
N. humerosa	100
Nitzschia seriata	300
Chlorophyta	700
Chlamydomonas pulsatilla	700
Chrysophyta	100
Phaeocystis pouchetii	100
Cryptophyta	400
Chroomonas placoidea	400

Table 37. Species composition and abundance of surface phytoplankton in Frobisher Bay at Station 35, September 8, 1982.

Total phytoplankters (cells·L^{-1})	13,200
Bacillariophyta	11,700
Centrales	10,200
Chaetoceros affinis	2,500
C. decipiens	500
C. furcellatus	4,600
C. septentrionalis	200
C. wighami	400
Coscinodiscus lacustris	200
Thalassiosira decipiens	800
T. gravida	200
T. nordenskioeldii	800
Pennales	1,500
Cocconeis scutellum	100
Grammatophora arctica	1,100
Navicula peregrina	100
Nitzschia frigida	100
Pinnularia sp.	100
Chlorophyta	700
Chlamydomonas pulsatilla	700
Cryptophyta	300
Chroomonas placoidea	300
Pyrrophyta	500
Prorocentrum micans	300
P. rampii	200

Table 38. Species composition and abundance of surface phytoplankton in Frobisher Bay at Station 36, September 8, 1982.

Total phytoplankters (cells·L^{-1})	53,700
Bacillariophyta	48,300
Centrales	45,500
Chaetoceros affinis	12,300
C. debilis	2,800
C. decipiens	2,900
C. furcellatus	15,600
C. septentrionalis	1,500
C. wighami	4,500
Coscinodiscus lacustris	200
Thalassiosira decipiens	3,200
T. gravida	300
T. nordenskioeldii	2,200
Pennales	2,800
Cocconeis distans	100
C. scutellum	300
Cymbella leptoceros	100
Navicula agrestis	300
N. humerosa	100
N. imperfecta	100
N. valida	100
Nitzschia frigida	100
N. seriata	900
Opephora martyi	200
Pinnularia sp.	500
Chlorophyta	2,600
Chlamydomonas pulsatilla	2,500
Closterium sp.	100
Chrysophyta	700
Phaeocystis pouchetii	700
Cryptophyta	1,300
Chroomonas placoidea	1,300
Pyrrophyta	800
Goniaulax sp.	100
Peridinium diabolus	300
Prorocentrum rampii	400

Table 39. Species composition and abundance of surface phytoplankton in Frobisher Bay at Station 37, September 8, 1982.

Total phytoplankters (cells·L^{-1})	30,200
Bacillariophyta	25,300
Centrales	24,600
Chaetoceros affinis	9,000
C. decipiens	1,000
C. furcellatus	6,600
C. septentrionalis	2,900
C. wighami	1,200
Coscinodiscus lacustris	200
Thalassiosira decipiens	2,700
T. gravida	200
T. nordenskioeldii	800
Pennales	700
Diploneis smithii	100
Nitzschia seriata	100
Opephora martyi	300
Pinnularia sp.	200
Chlorophyta	3,800
Carteria cordiformis	200
Chlamydomonas pulsatilla	3,700
Cryptophyta	600
Chroomonas placoidea	600
Pyrrophyta	400
Goniaulax monilata	100
Peridinium diabolus	100
Prorocentrum rampii	200

Table 40. Species composition and abundance of surface phytoplankton in Frobisher Bay at Station 38, September 8, 1982.

Total phytoplankters (cells·L^{-1})	13,500
Bacillariophyta	11,300
Centrales	9,400
Chaetoceros affinis	1,600
C. decipiens	500
C. externum	300
C. furcellatus	1,800
C. septentrionalis	300
C. wighami	1,000
Thalassiosira decipiens	2,100
T. gravida	1,000
T. nordenskioeldii	800
Pennales	1,900
Amphora sp.	100
A. te. oris	100
Diploneis smithii	200
Eunotia veneris	100
Licmophora dalmatica	200
Navicula agrestis	200
Nitzschia frigida	300
N. seriata	300
Pinnularia sp.	400
Chlorophyta	1,900
Carteria cordiformis	200
Chlamydomonas pulsatilla	1,700
Cryptophyta	200
Chroomonas placoidea	200
Pyrrophyta	100
Prorocentrum rampii	100

Table 41. Species composition and abundance of surface phytoplankton in Frobisher Bay at Station 39, September 8, 1982.

Total phytoplankters (cells·L^{-1})	18,200
Bacillariophyta	16,600
Centrales	14,400
Chaetoceros affinis	2,800
C. decipiens	600
C. externum	100
C. furcellatus	5,300
C. septentrionalis	300
C. socialis	300
C. wighami	1,100
Coscinodiscus lacustris	600
Thalassiosira decipiens	1,600
T. gravida	1,000
T. nordenskioeldii	700
Pennales	2,200
Cocconeis scutellum	100
Fragilaria islandica	100
Gyrosigma sp.	200
Navicula agrestis	100
N. gastrum	200
N. imperfecta	200
N. peregrina	200
N. protracta	100
Nitzschia frigida	500
N. seriata	400
Opephora martyi	100
Chlorophyta	600
Chlamydomonas pulsatilla	600
Chrysophyta	100
Phaeocystis pouchetii	100
Cryptophyta	600
Chroomonas placoidea	600
Pyrrophyta	300
Goniaulax monilata	100
Prorocentrum rampii	200